

What is claimed is:

1. A traceable patch cable used to transmit signals from a receptacle to another receptacle comprising:

a cable; and

two connectors disposed on opposite ends of said cable;

wherein said cable comprises at least one electrical wire for transmitting signals and an optical fiber for transmitting light, said connectors terminate said at least one electrical wire therein so that the at least one electrical wire can be electrically connected to at least a terminal in a corresponding said receptacles, at least a first of the two connectors defines a passage and terminates a first end of the optical fiber opposite to the passage, a second of the two connectors forms an illuminating member thereon and terminates a second end of the optical fiber therein with a predetermined distance left between the illuminating member and the second end of the optical fiber, when a light beam shines through the passage of the first connector at a first end of the patch cable, the light travels through the optical fiber from a first end to a second end thereof, the light exiting from the second end of the optical fiber irradiates the illuminating member of the second connector at a second end of the patch cable, and thus the illuminating member luminesces for identification.

2. The traceable patch cable as claimed in claim 1, wherein each of the two connectors comprises an illuminating member, and said passage is defined in each illuminating member.

3. The traceable patch cable as claimed in claim 1, wherein the illuminating member is made from a luminescent material that can luminesce when it receives light.

4. The traceable patch cable as claimed in claim 3, wherein the illuminating member is formed by painting or sputtering.

5. The traceable patch cable as claimed in claim 4, wherein the illuminating member is made from a material containing chrome.
  6. The traceable patch cable as claimed in claim 1, wherein an optical collimator is disposed between the illuminating member and the corresponding end of the optical fiber.
  7. The traceable patch cable as claimed in claim 6, wherein the illuminating member comprises a ferrule for fixing the optical fiber and a lens for or collimating light.
  8. The traceable patch cable as claimed in claim 1, wherein said connector comprises a transparent housing, and the illuminating member is formed on an outer surface of the transparent housing.
  9. The traceable patch cable as claimed in claim 8, wherein the ends of the optical fiber are fixed in the housing respectively opposite to the illuminating member and the passage.
10. A connector assembly comprising:
- a patch panel;
  - a plurality of terminals; and
  - a plurality of patch cables, each patch cable electrically connecting the patch panel and one terminal for signal transmission therebetween, each patch cable comprising a cable and two connectors disposed on opposite ends of the cable, the two connector respectively mating with the patch panel and one terminal; wherein the cable comprises at least one electrical wire to transmit signals between the patch panel and the terminal, and further comprise an optical fiber for transmitting light therethrough, wherein at least one of the two connectors defines a passage therein, the other of the two connectors forms an illuminating member, using a light beam shining through the passage at a first end of the cable, the light travels through the optical fiber and irradiates the illuminating member, the illuminating

member then luminesces at a second end of the cable for identification.

11. The connector assembly as claimed in claim 10, wherein each of the two connectors comprises an illuminating member, and said passage is defined in each illuminating member.

12. The connector assembly as claimed in claim 10, wherein the illuminating member is made from a luminescent material that can luminesce when it receives light.

13. The connector assembly as claimed in claim 10, wherein an optical collimator is disposed between the illuminating member or the passage and the corresponding end of the optical fiber.

14. The connector assembly as claimed in claim 10, wherein said connector comprises a transparent housing, and the illuminating member is formed on an outer surface of the transparent housing.

15. A method for identifying corresponding ends of a patch cable used to transmit signals between a pair of receptacles, the patch cable comprising a cable and two connectors disposed on opposite ends of the cable, the cable having at least one electrical wire for signal transmission and an optical fiber for transmitting light, the connectors respectively removably mate with the receptacles, the method comprising the steps of:

forming a passage at least in a first of the two connectors and an illuminating member at least on a second of the two connectors;

providing an external light beam shining through the passage of the first connector at a first end of the patch cable, then the light traveling through the optical fiber to irradiate the illuminating member of the second connector at a second end of the patch cable;

identifying the illuminated ends at the second end of the patch cable as the corresponding end.

16. The method as claimed in claim 15, wherein each of the two connectors comprises an illuminating member, and each illuminating member defines said passage therein.

17. A traceable cable assembly comprising:

a cable including at least one wire for transmission of signal and at least one transmitting device; and

a pair of connectors attached to two opposite ends of the cable, respectively, each of said connectors including at least one contact electrically connected to the at least one wire, for implementing the transmission of the signal,

at least one of said connectors further including an actuating device which intentionally and independently initiates, either actively or passively, an identification symbol, wherein said identification symbol moves along said transmitting device and is able to be visually identified on the other one of said connectors.

18. The traceable cable assembly as claimed in claim 17, wherein said both said pair of connectors are equipped with said actuating devices, and an identification process between said pair of connectors is adapted to be practiced in dual directions.

19. The traceable cable assembly as claimed in claim 17, wherein said identification symbol is a light beam rather than an electrical signal.

20. The traceable cable assembly as claimed in claim 17, wherein said transmitting device is either an optic fiber or a light pipe